ABSTRACT OF THE DISCLOSURE

An excitation light irradiating device irradiates excitation light to a measuring site, the excitation light causing the measuring site to produce fluorescence. An imaging system detects an image of the fluorescence, which has been produced from the measuring site when the excitation light is irradiated to the measuring site. An imaging controller controls operations of the imaging system. The imaging system is provided with an image sensor, which comprises a plurality of pixels arrayed in two-dimensional directions and which has a fluorescence imaging region utilized for the imaging of the fluorescence and a non-imaging region other than the fluorescence imaging region. The imaging controller controls such that, when signal charges are to be read from the image sensor, signal charges, which have been accumulated in at least certain pixels among pixels falling within the non-imaging region, are read with a quick reading operation, in which the signal charges are read at a reading speed higher than the reading speed for the fluorescence imaging region.